

Amendments to the Specification:

*At page 1, line 1, please delete subheading:*

~~DESCRIPTION~~

*Please amend the title to read as:*

METHOD FOR PRODUCING AN ELECTROMAGNETIC RADIATION-EMITTING  
SEMICONDUCTOR CHIP AND A CORRESPONDING ELECTROMAGNETIC  
RADIATION-EMITTING SEMICONDUCTOR CHIP

*Please insert the following paragraph after the title:*

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is the National Stage of International Application No.  
PCT/DE2003/002786, filed August 21, 2003, which claims the benefit of German Patent  
Application Serial No. 10239045.2, filed on August 26, 2002. The contents of both applications  
are hereby incorporated by reference in their entireties.

*Please delete the paragraphs beginning at page 1, line 6, which starts with " The  
invention concerns ".*

*Please delete the paragraphs beginning at page 1, line 15, which starts with "The present  
application".*

*At page 1, in the blank space above the paragraph beginning "In this context" insert a  
new subheading:*

BACKGROUND OF THE INVENTION

*Please amend the paragraph beginning at page 2, line 1, as follows:*

To fabricate such LEDs by epitaxy, a substrate is needed on which the various semiconductor layers in the sequence can be deposited insofar as possible in monocrystalline form. Such a substrate for the epitaxy of AlGaInP-based LEDs should meet the following conditions:

- it ~~[[must]]~~should have a lattice constant that enables the material systems AlGaInP and AlGaAs to be deposited in monocrystalline form,
- it ~~[[must]]~~should remain sufficiently solid at the process temperatures used, and
- it ~~[[must]]~~should be available commercially in sufficiently good quality.

*At page 2, in the blank space above the paragraph beginning "The object of the invention" insert a new subheading:*

SUMMARY OF THE INVENTION

*Please amend the paragraph beginning at page 2, line 22, as follows:*

This object is achieved by means of a method having ~~the~~ features described herein of Claim 1. Further advantageous embodiments and improvements of the method will emerge ~~from~~ dependent Claims 2 to 8 in the following description.

*Please amend the paragraph beginning at page 2, line 25, as follows:*

An electromagnetic-radiation-emitting semiconductor chip that can be fabricated according to the method of the invention ~~constitutes the subject matter of Claim 9~~ is also described herein. Advantageous embodiments and improvements of the semiconductor chip will also emerge in the following description ~~of the invention form the subject matter of dependent Claims 10 and 11~~.

*Please insert the following new paragraph at page 2, in the blank space above the paragraph beginning "It is provided according":*

The invention concerns a method of fabricating an electromagnetic-radiation-emitting semiconductor chip based on AlGaInP, comprising the method steps of: preparing a substrate;

applying to the substrate a semiconductor layer sequence comprising a photon-emitting active layer; and applying a transparent decoupling layer, particularly a decoupling layer comprising  $(\text{Ga}_x(\text{In}_y\text{Al}_{1-y})_{1-x}\text{P})$ , wherein  $0.8 \leq x$  and  $0 \leq y \leq 1$ . The invention also concerns an electromagnetic-radiation-emitting semiconductor chip based on AlGaInP, comprising a substrate, a semiconductor layer sequence applied to the substrate and comprising a photon-emitting active layer, and a transparent decoupling layer disposed on the active layer and comprising GaP.

*At page 4, in the blank space above the paragraph beginning "The single figure" insert a new subheading:*

BRIEF DESCRIPTION OF THE DRAWINGS

*At page 4, in the blank space above the paragraph beginning "The LED chip 10" insert a new subheading:*

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

*At page 8, line 14, delete:*

~~[[FIG. 1]]~~